APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,078	06/28/2001	Harriet G. Coverston	P6607	6570

7590   09/03/2003

David W. Victor
KONRAD RAYNES & VICTOR LLP
Suite 210
315 S. Beverly Drive
Beverly Hills, CA   90212

EXAMINER
GODDARD, BRIAN D

ART UNIT	PAPER NUMBER
2171	

DATE MAILED: 09/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.	Applicant(s)
Office Action Summary	09/894,078	COVERSTON ET AL.
	Examiner	Art Unit
	Brian Goddard	2171

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 November 2002</u> .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-54</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-54</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>28 June 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1.   This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2.   Claims 1-13, 19-31 and 37-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,490,666 to Cabrera et al. in view of U.S. Patent Application Publication No. 2001/0003829 to Romine.

Referring to claim 1, Cabrera discloses a method for managing files in a file system as claimed. See Figures 1-3 & 6-7 and the corresponding portions of Cabrera's specification for this disclosure. In particular, Cabrera teaches a method for managing

files in a file system [See Figs. 1-2], wherein an application program accesses files in

the file system [See Figs. 6-7], comprising:

provide a plurality of files in a primary storage [122] used by the application

program;

applying a criteria [See column 1, line 52 – column 2, line 3] to determine files to

release [migrate] in the primary storage that have been copied to a secondary storage

[124];

receiving [Steps 700-701] a request [no recall request] for data from the

application program in one file that was released [NO branch from step 704] and resides

on the secondary storage; and

reading [Steps 706-722] the data from the file in the secondary storage into a

memory [120] accessible to the application program as claimed.

Cabrera does not explicitly state that data from the file in the memory is provided

to the application program before the entire file has been read from the secondary

storage into the memory as claimed. However, Cabrera does state that the purpose for

using a no recall request method is to provide the file (via streaming) to the requesting

application without recalling the entire file to disk. See column 2, lines 22-25 of

Cabrera's specification for this disclosure. Thus, Cabrera is merely silent on the

functional details of streaming the file (or portion thereof) to the requesting application,

but does provide explicit suggestion for providing data from the file in the memory to the

application program before the entire file has been read from the secondary storage.

Romine discloses a system and method similar to that of Cabrera, and

elaborates further on the functional details of streaming a file (or portion thereof) to a

requesting application program. Specifically, Romine teaches that streaming a file from

a secondary storage to an application program involves "reading the data from the file in

the secondary storage into a memory [random access memory buffer] accessible to the

application program" and "providing data from the file in the memory to the application

program before the entire file has been read from the secondary storage into the

memory" as claimed. See paragraphs 0058-0060 of Romine's specification for this

disclosure.

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to implement Romine's file streaming functionality in Cabrera's

system so as to provide data from the file in the memory to the requesting application

program before the entire file is read from the secondary storage into the memory to

obtain the invention as claimed. One would have been motivated to do so because of

Cabrera's direct suggestion as discussed above.

Referring to claim 2, the system and method of Cabrera in view of Romine as

applied to claim 1 discloses the invention as claimed. See Figures 3-5 and the

corresponding portions of Cabrera's specification for this disclosure. In particular,

Cabrera's (as modified by Romine) method further comprises "storing in the primary

storage a partial version of at least one released file ["stub file" – at least one data block

buffered from the original file], wherein the partial version includes a portion of the data

[data block] in at least one released file [See column 1, lines 53-58 & the discussions of steps 604 and 704]" as claimed.

Referring to claim 3, the system and method of Cabrera in view of Romine as applied to claim 2 above discloses the invention as claimed. See Figures 1-3 and the corresponding portions of Cabrera's specification for this disclosure. In particular, Cabrera's (as modified by Romine) partial version of the file [data block] comprises a first number of bytes [data-block-size] of the released file that is less than all the bytes in the file [See column 3, lines 48-65], further comprising receiving user input indicating the first number of bytes [user specified data-block-size] included in the partial version [data block] of the file as claimed.

Referring to claim 4, the system and method of Cabrera in view of Romine as applied to claim 2 above discloses the invention as claimed. See Figures 5-7 and the corresponding portions of Cabrera's specification for this disclosure. In particular, Cabrera (as modified by Romine) teaches the method of claim 2, as above, wherein an attribute [500 & 502] is provided for each file indicating whether the partial version of the file [data block] is maintained in the primary storage [is buffered] after the file is released, wherein the partial version is only maintained in the primary storage for those released files having the attribute indicating that the partial version is to be maintained [search_key (500) indicating a file identifier and attribute (502) indicating 'valid'] as claimed.

Referring to claim 5, the system and method of Cabrera in view of Romine as applied to claim 2 above discloses the invention as claimed. See Figures 6-7 and the

corresponding portions of Cabrera's specification for this disclosure. In particular, Cabrera (as modified by Romine) teaches the method of claim 2, as above, wherein the requested data is in the partial version [is in a buffered data block (YES branch of Step 704)], further comprising reading the data from the partial version of the file in the primary storage into the memory [Step 708] to make available to the application program as claimed.

Referring to claim 6, the system and method of Cabrera in view of Romine as applied to claim 5 above discloses the invention as claimed. Again, see Figures 6-7 and the corresponding portions of Cabrera's specification for this disclosure. In particular, Cabrera (as modified by Romine) teaches the method of claim 5, as above, further comprising:

"receiving a further request [701] from the application program for data in the file that is not included in the partial version of the file [NO branch of Step 704]; and

determining [Step 706] a location in the file in the secondary storage of the further requested data, wherein reading the data from the file in the secondary storage comprises reading data from the determined location in the file in the secondary storage into the memory to make available to the application program [Steps 710-722]" as claimed.

Referring to claim 7, the system and method of Cabrera in view of Romine as applied to claim 6 above discloses the invention as claimed. See Figures 3-7 and the corresponding portions of Cabrera's specification for this disclosure. In particular, Cabrera (as modified by Romine) teaches the method of claim 6, as above, wherein

data is read from the file in the secondary storage in a fixed byte length [buffer size] window [data block], and wherein reading the further requested data from the determined location in the file in the secondary storage further comprises reading enough data to fill the fixed length byte window [data block] by reading data from the partial version and the further requested data read from the determined location in the secondary storage [Step 712], wherein the window of the data is transferred to the memory [buffer] as claimed.

Referring to claim 8, the system and method of Cabrera in view of Romine as applied to claim 1 above discloses the invention as claimed. See Figures 3-7 and the corresponding portions of Cabrera's specification for this disclosure. In particular, Cabrera (as modified by Romine) teaches the method of claim 1, as above, wherein data is read from the file in the secondary storage [Steps 706-722] in a fixed byte length [buffer size] window [data block] as claimed.

Referring to claim 9, the system and method of Cabrera in view of Romine as applied to claim 8 above discloses the invention as claimed. See Figures 6-7 and the corresponding portions of Cabrera's specification for this disclosure. In particular, Cabrera (as modified by Romine) teaches the method of claim 8, as above, wherein multiple windows [data blocks] of data are read from the file in the secondary storage into the memory [buffers] in response to the data request [for more than one data block of a file] as claimed.

Referring to claim 10, the system and method of Cabrera in view of Romine as applied to claim 8 above discloses the invention as claimed. See Figures 6-7 and the

corresponding portions of Cabrera's specification for this disclosure. Cabrera (as modified by Romine) teaches the method of claim 8, as above, further comprising:

"receiving a request [Step 701] for data from the file that follows [subsequent data block] the data transferred into the memory [data block already stored to a memory buffer]; and

reading [Step 706] at least one window [data block] of further data having the fixed byte length from the file in the secondary storage into the memory to make available to the application program [Step 722]" as claimed.

Referring to claim 11, the system and method of Cabrera in view of Romine as applied to claim 8 above discloses the invention as claimed. See Figures 6-7 and the corresponding portions of Cabrera's specification for this disclosure. In particular, Cabrera's step of reading the data into the window further comprises:

"storing [Step 712] the data read into the window [data block] in the memory [buffer]; and

making the data from the window read into the memory available [Step 722] to the application program before the entire window of data is read into the memory [See the discussion regarding claim 1 above]" as claimed.

Referring to claim 12, the system and method of Cabrera in view of Romine as applied to claim 8 above discloses the invention as claimed. See the discussion regarding claim 3 above for the details of this disclosure. In particular, Cabrera's (as modified by Romine) system allows a user to specify the data-block-size (size of the fixed byte length of the window) as claimed.

Referring to claim 13, the system and method of Cabrera in view of Romine as

applied to claim 1 above discloses the invention as claimed. See Figure 5 and the

corresponding portion of Cabrera's specification for this disclosure. In particular,

Cabrera (as modified by Romine) teaches the method of claim 1, as above, wherein a

stage attribute [502] is associated with each file indicating whether to stage the file

transferred from the secondary storage to the memory into the primary storage,

comprising staging data to the primary storage [Steps 614-616] that was transferred

from the secondary storage only if the stage attribute indicates that data from the file is

to be staged as claimed.

Claims 19-31 are rejected on the same basis as claims 1-13 respectively. See

the discussions regarding claims 1-13 above for the details of this disclosure.

Claims 37-49 are rejected on the same basis as claims 1-13 respectively. See

the discussions regarding claims 1-13 above for the details of this disclosure.

3.   Claims 14-18, 32-36 and 50-54 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Cabrera in view of Romine as applied to claim 1 above, and further in

view of U.S. Patent No. 6,269,431 to Dunham.

Referring to claim 14, neither Cabrera nor Romine explicitly teaches component

files of groups accessed by the application program as claimed. However, both

references teach that the files could be any type of files accessed by any type of

application program. See the Background and Summary of the Invention sections of

each reference for this disclosure.

Dunham discloses a system and method similar to those of Cabrera and Romine, wherein the files include component files of groups [table spaces] that are accessed by an application program [database program] as claimed. See Figure 9 and the corresponding portion of Dunham's specification for this disclosure.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Dunham's database program and table spaces as an application and component files of groups respectively within the system of Cabrera in view of Romine, so as to apply the method of Cabrera in view of Romine as above to a database application program using tablespace files. One would have been motivated to do so in order to allow the system to operate on a broader range of applications and file types, especially applications of common usage such as a database program.

Referring to claim 15, the system and method of Cabrera in view of Romine and Dunham as applied to claim 14 above discloses the invention as claimed. In all three systems, and thus in the combined system, the files are capable of being stored in both the primary and secondary storages as claimed. See e.g. Figures 1-2 of Cabrera and Figures 1-3 of Dunham.

Referring to claim 16, the system and method of Cabrera in view of Romine and Dunham as applied to claim 14 above discloses the invention as claimed. See Figure 9 and the corresponding portion of Dunham's specification for this disclosure. Dunham's component files, as applied to the system and method of Cabrera in view of Romine above, are capable of being released and replaced by the partial version [See relevant

portions of Cabrera as well as combination above] and are included in groups [tablespaces] that are open to the application program as claimed.

Referring to claims 17 and 18, the system and method of Cabrera in view of Romine and Dunham as applied to claim 14 above discloses the invention as claimed. See the discussion regarding claim 14 above, as well as the relevant portions of Cabrera and Dunham's specifications for this disclosure.

Claims 32-36 are rejected on the same basis as claims 14-18 respectively, in light of the basis for claim 19. See the discussions regarding claims 14-19 for the details of this disclosure.

Claims 50-54 are rejected on the same basis as claims 14-18 respectively, in light of the basis for claim 37. See the discussions regarding claims 14-18 and 37 above for the details of this disclosure.

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,604,118 to Kleiman et al. and 6,185,621 to Romine are each considered particularly pertinent to applicants' claimed invention.

The remaining prior art of record is considered pertinent to applicants' disclosure, and/or portions of applicants' claimed invention.

5.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Goddard whose telephone number is 703-305-7821. The examiner can normally be reached on M-F, 9 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

bdg

SAFET METJAHIC
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100